

AVA Electric Actuator Function: **POWERED CONTINUALLY, MOVEMENT PROPORTIONAL TO CONTROL SIGNAL**



**Type: EA-1305H**

AVA Smart actuator shown direct mounted to 3 way brass ball valve

**1 Second working time**

**3 Way Ball Valve - Flow paths**

L Port: Divert duty only

T Port: Divert or Mixing duties



Very compact design

**AVA Compact Basic On-Off electric actuator features:**

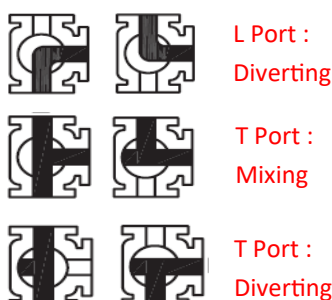
- Compact size.
- Fully weatherproof basic industrial actuator.
- All external electrical connections, no need to remove cover .
- Individual voltage motors.
- Position setting using cams and micro-switches.
- Manual override facility.
- Electronic torque limiter.
- Thermostatic anti-condensation heater.
- End of travel switches for remote open/ closed indication.
- CE Marked.
- ABS housing (aluminium option).

**MODULATING NOT AVAILABLE IN BASIC SERIES**

**3 Way ball valve information:**

Full bore 3 way ball valve providing full flow and a relatively low pressure drop across the valve. Designed for automation with integrally cast ISO5211 actuator mounting platform. End connections are threaded BSP female.

3 Way brass ball valves are used to change the direction of flow as opposed to 2 way ball valves that simply isolate the flow, and are available as either a L-port or T-port design. L-port diverter valves typically divert flow from the centre port to either output port. T-port valves are used for either mixing or diverting type flow functions. As a diverting valve the T port valve provides straight through flow in one position.



**AVA Compact Smart Modulating Actuator Features:**

- Compact size.
- Fully weatherproof smart industrial actuator.
- All external electrical connections, no need to remove cover .
- Multi-voltage power supply. 4-20ma or 0-10V control I/O
- Position control uses digital magnetic electronics, no cams.
- Manual override facility.
- Electronic torque limiter.
- Thermostatic anti-condensation heater.
- End of travel relays for remote open/ closed indication.
- CE Marked.
- ABS housing (aluminium option).
- Fast acting version (1 second 0-90 degrees)

**Modulating function:**

The position of the valve is set proportionally to an input control signal. The AVA actuator compares the signal with the physical position and if a difference exists, runs the motor to eliminate the difference.

**Applications:**

Potable water, oil, air and most non-corrosive media, subject to compatibility with wetted parts in contact with media. This assembly is NOT recommended for use on steam.

Valve actuators sized on a maximum differential pressure of 10 bar wet service, operated at least once per day. If the intended duty differs from these parameters, or is dry (air or gas), please call to check the actuator sizing as a larger output electric actuator may be required.

Maximum working temperature of a direct mounted assembly is +60C. For higher working temperatures , consider models that have a mounting kit between the valve and the AVA electric actuator which uses air cooling to dissipate the rising heat from the valve away from the actuator. Should the AVA electric actuator see more than +60C it will malfunction.

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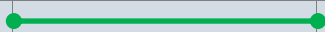
**Specifications:**

	AVA BASIC ACTUATOR	AVA SMART ACTUATOR
Actuator housing	-	ABS
Supply voltage range	-	24VDC ONLY
Motor Control	-	Magnetic digital position sensing & control
Position Confirmation	-	Electronic relays
IP Rating	-	IP67
Actuator temp limits	-	-20 to +60°C
Control Signal	-	0-10V, 4-20mA (Options 2-10V, 0-20mA)
Working Time	-	1 Sec (0-90 deg)
Assembly temp limits	Not available in modulating control	EAS-1105H +60°C Actuator Direct mounted
	-	EAS-1115H +95°C Actuator mounted via kit
Valve body	-	Nickel plated brass
Valve ball	-	Chrome plated brass
Valve seats	-	PTFE
Valve seals	-	NBR
Ends	-	Screwed BSPP
Valve Pressure rating	-	UTI 3/4" 30bar, to 1 1/4" 20bar, rest 16 bar
Valve temp limits	-	-20 to +90°C
Valve Size range	-	1/2" to 2"

**Wiring Diagrams:**

Note: AVA Model 20 actuator supplied with approx 0.75m flying lead (9 colour coded cores as per wiring diagram below).

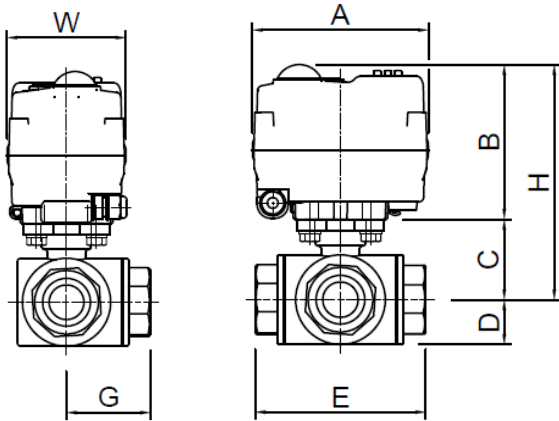
UK Stock wiring:

Neutral	Blue wire		N / -	MOTOR CONTROL
Live	Red wire		L / +	
Control Signal Output/ Feedback	Brown wire		-	CONTROL SIGNAL I/O (Typically 0-10V or 4-20mA)
Control (-)	White wire		-	
Control (+)	Grey wire		+	
Earth	Green wire		E	EARTH

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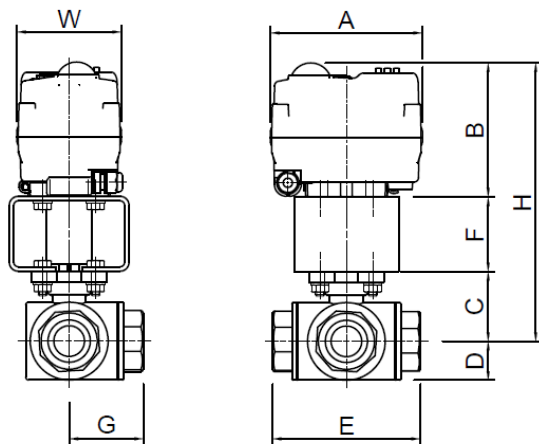
**Typical Dimensions:** Note: Overall dimensions are the same for basic and smart AVA actuators

**Type: EA-1305H** AVA Actuator direct mounted to valve, maximum working temperature +60C



	Model	A	B	C	E	H	W	Kilos
1/2"	20	102	83	33	78	116	70	1.1
3/4"	20	102	83	42	87	125	70	1.2
1"	20	102	83	47	105	130	70	1.5
1 1/4"	20	102	83	52	118	135	70	1.9
1 1/2"	20	102	83	70	134	153	70	2.2
2"	20	102	83	80	161	163	70	3.0

**Type: EA-1315H** AVA Actuator fitted to valve via a bracket and drive adapter, maximum working temperature +95C



	Model	A	E	F	H	W	Kilos
1/2"	20	102	78	50	166	70	1.4
3/4"	20	102	87	50	175	70	1.5
1"	20	102	105	50	180	70	1.8
1 1/4"	20	102	118	50	185	70	2.2
1 1/2"	20	102	134	50	203	70	2.5
2"	20	102	161	50	213	70	3.3

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**Brief Comparison Between AVA Compact Actuator Models:**

AVA BASIC ACTUATOR	FEATURE	AVA SMART ACTUATOR
		
ABS plastic (aluminium base)	Housing	ABS plastic (aluminium base)
Internal cams and micro-switches	Motor Control	Digital magnetic position sensing
Internal cams and micro-switches	Position Confirmation Signal	Electronic relays
Dome mechanical indicator	Position Confirmation Visual	Dome mechanical indicator + OLED screen
IP67	Weatherproof	IP67
Yes, pre-wired	Anti-condensation Heater	Yes, pre-wired
-20°C to +60°C	Ambient Temperature	-20°C to +60°C
24VDC, 24VAC, 110VAC, 240VAC	Voltages/ Range	24V AC/DC or 95-265V AC/DC
Yes, with supplied hexagon tool	Manual Override	Yes, with supplied hexagon tool
Pre-wired with multi-colour 0.8m cable	Electrical Connection	Pre-wired with multi-colour 0.8m cable
F03, F04 (at 45°), F05 x 14mm octagon	Valve Mounting	F03, F04 (at 45°), F05 x 14mm octagon
Not available	Local Control	Yes with OLED screen and 3 push buttons
Remove cover and adjust cams	Working Angle Control	Yes with OLED screen and 3 push buttons
Not available	Speed Control	Yes with OLED screen and 3 push buttons
Not available	3 Position Control	Yes with OLED screen and 3 push buttons
	<b>OPTIONS</b>	
Yes	Aluminium Cover	Yes
Yes, by capacitor	Failsafe	Yes, by capacitor
Not available	<b>Fast Acting</b>	<b>Yes, 1 second working time (90°)</b>
Not available	<b>Modulating</b>	<b>Yes, 0-10V, 2-10V, 4-20mA, 0-20mA</b>
Not available	Bus Communications	Yes, Modbus, Profibus, Canbus
Not available	Wireless	Yes, RF Ocean, RF-Lora
Not available	Timer	Yes
Not available	Alarm Function	Yes